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CBM+ IT Bridging Infrastructure

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ALWAYS THERE.

ALWAYS READY.

Purpose

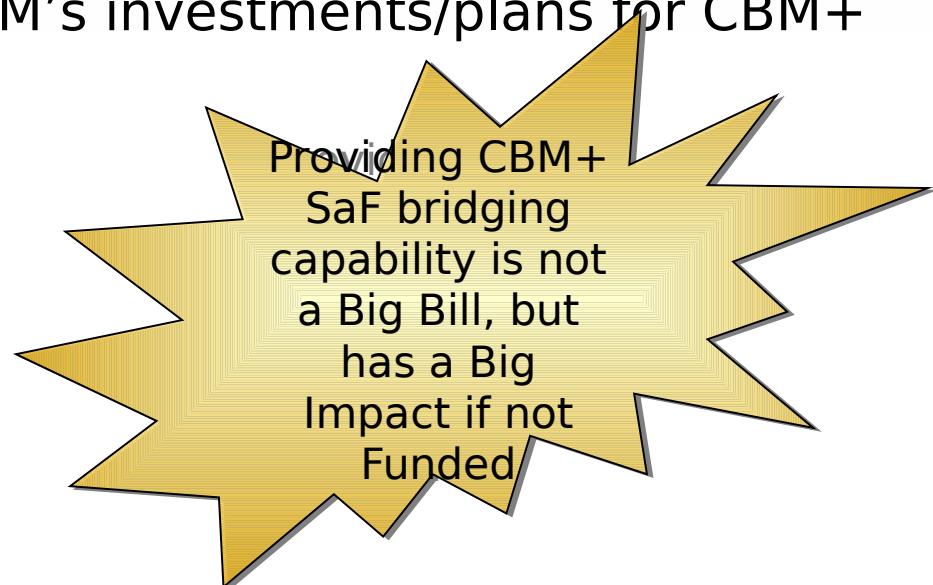
- ❑ Provide an information brief on a strategy to field a bridging CBM+ IT infrastructure for Army ground platforms, and solicit guidance on path forward to a decision brief

Agenda

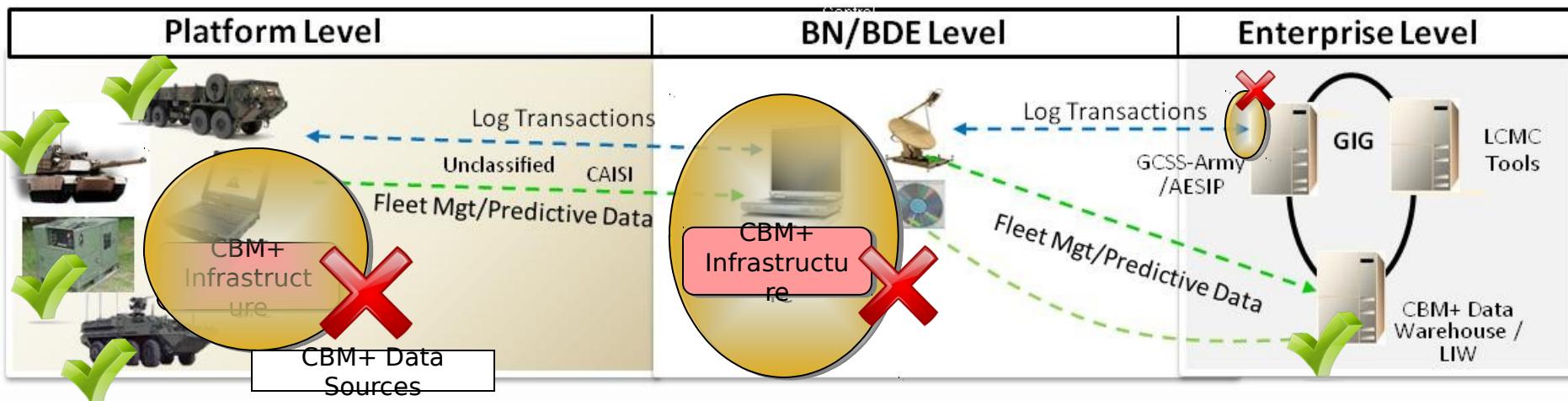
- BLUF
- Problem Statement
- Proposed CBM+ Infrastructure Bridging Strategy
 - CBM+ Store and Forward (SaF) capability
 - Materiel Solutions
 - Recommended programs to manage fielding/sustainment
 - Field Evaluation Approach
 - Estimated costs and impacts if not funded
- Summary and Path Forward

BLUF

- ❑ CBM+ capability development between ground platforms PMs and the Logistics Enterprise is not aligned
- ❑ Recommend Logistics Enterprise accelerate the fielding of a bridging CBM+ store and forward (SaF) hardware and software capability in 2015
 - ~~Support ground platform~~ PM's investments/plans for CBM+ program proponents exist to support fielding and sustainment bridging capability



Problem Statement



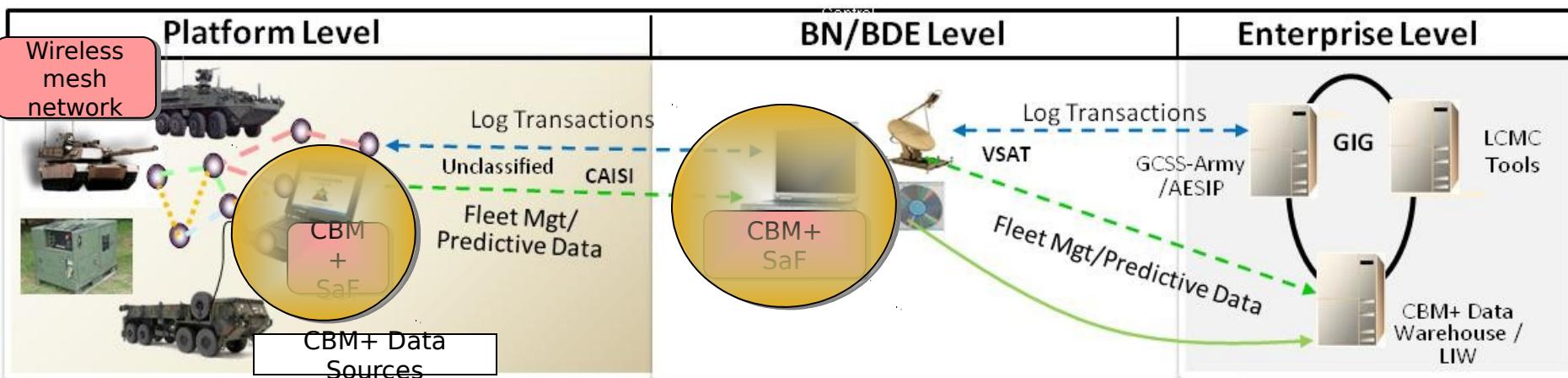
- **Problem** - Ground platform development of CBM+ capability and Logistics Enterprise development of CBM+ Capability is not aligned

- De-scoping CBM+ requirements from GCSS-Army caused loss of programmatic synchronization with Platform PMs
 - GCSS-Army will not reconsider CBM+ until post Wave 2 (2017+)
- PMs such as HBCT and SBCT were expecting Logistics Enterprise to provide CBM+ infrastructure by 2015 - impacts their projected return on investments
- Other PMs planning for CBM+, but without timeline for when CBM+ IT Infrastructure will be in place are foregoing or delaying

Problem Analysis - Background

- AMC CBM+ Summit in Jan 2012
 - Army leadership identified CBM+ IT Infrastructure gap as priority issue
 - Tasked CBM+ System Engineering IPT to develop a plan of action for identifying a proponent to accelerate fielding of capability
 - AMC CBM+ SE IPT Members – AMC G-6 (lead), LIA, AMC G-4, CERDEC, TACOM, AMCOM, CECOM; task also worked with CASCOM and HQDA G-44(M)/G-46
- Key updates since AMC CBM+ Summit
 - March 12 – Briefed AMC CBM+ Steering Committee
 - April 12 – Briefed G44(M)/Mr Lowman and AMC DG4/Ms Adams
 - May 12 – Briefed Log Domain Council of Colonels, tasked to follow up with Ms. Miller
 - June 12 – Update to the AMC CBM+ Steering Committee

Proposed Bridge Capability - CBM+ SaF & Wireless Mesh



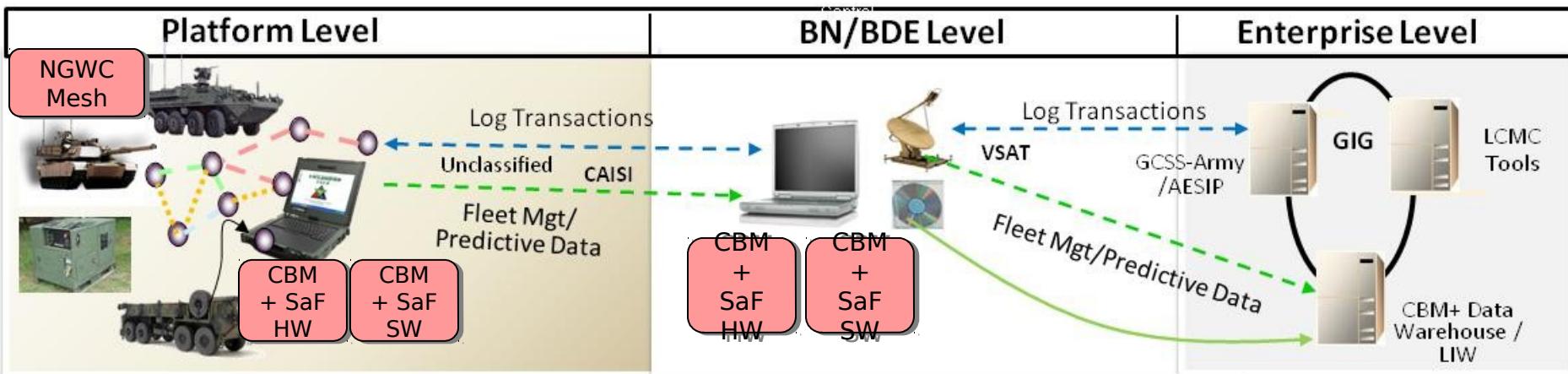
❑ CBM Store and Forward (SaF)

- Definition - data communications procedure in which data is collected and concentrated from originators, stored, and later forwarded to receiver.
- CBM+ SaF Capability
 - Software Service that runs on dedicated or shared hardware (PC-based)
 - Uses existing network transport (CAISI/VSAT)
 - Business rules to manage data delivery over limited Bandwidth

❑ Mesh Network – Automated wireless reporting of platform condition data

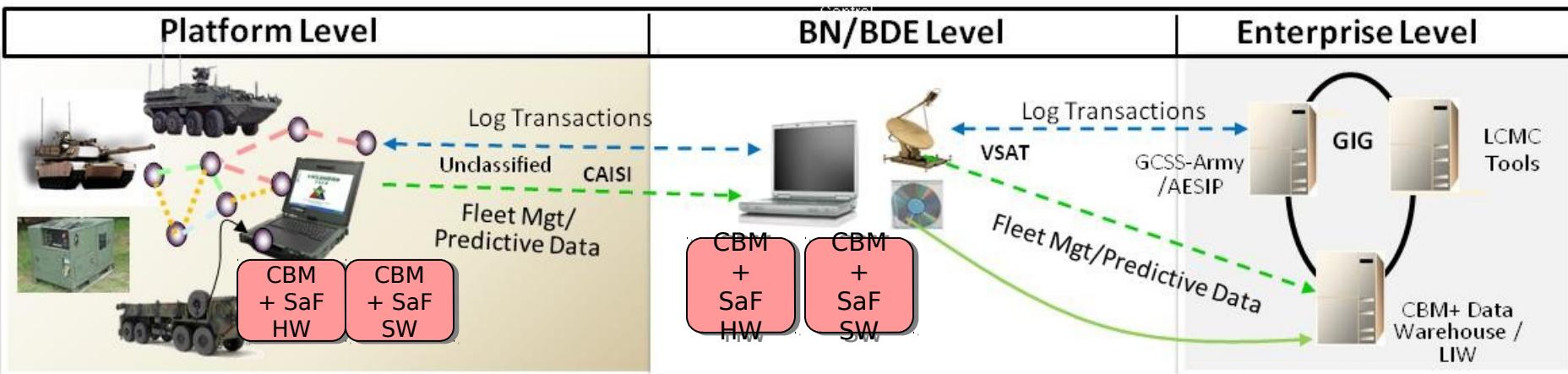
- Complementary capability to SaF, reduces maintainer “touch time” to collect data

Recommended CBM+ SaF Solution



- ❑ CBM+ SaF Hardware
 - Platform Level – Existing PD TMDE Maintenance Support Device (MSD)
 - BN/BDE Level – No existing HW; but requirements are minimal
 - 6 per HBCT/IBCT/SBCT; COTs Laptop with 2 TB Storage
- ❑ CBM+ SaF Software – Logistics Joint Delivery Management Services (JDMS)
 - Log JDMS = Integration of JTDI & CIMS SW
 - MOA signed between LIA and PM JTDI for CIMS technology transfer – single Army solution
- ❑ Wireless Mesh – Next Generation Wireless Communication (NGWC)
 - NGWC currently deployed in Kuwait by AMC (Army Mobility Asset Tracking System)

Program Proponent Recommendation



- CBM+ SaF Hardware Alternatives
 - PD-TMDE
 - COTS IT Mgt Process
- Discussion of Preferred Alternative
 - PD-TMDE already manages BOIP of over 40k MSDs for platform level SaF HW
 - BN/BDE SaF HW can be added as additional configuration under PD-TMDE portfolio

- CBM+ SaF Software Alternatives
 - PM JTDI
 - PM AESIP / PM GCSS-A
- Discussion of Preferred Alternative
 - SaF fits best with a data transmission mission (e.g. JTDI or PEO C3T).
 - CBM+ SaF in scope of JTDI ORD
 - PM JTDI is Navy program w Joint Interest (currently support Army Aviation CBM+ data transmission)

CBM+ Bridge Capability- Field Evaluation Approach

Existing Programs

- CECOM & TACOM CBM+ Pilot Program
- AMCOM Network Centric Logistics (JTDI)
- CLOE (CIMS)
- NGWC JCTD

- Electronic Motor Stables CBM+ Demonstration
 - Automated usage updates
 - Fault reporting and remote triage
- Align with CECOM CBM+ EOA demonstration timeline

FY13

FY14

- Network Integration Evaluation - System Under Test

- ❑ Coordination among programs on-going to align schedules and identify any outstanding resource requirements

Impact If CBM+ SaF Gap is Not Filled

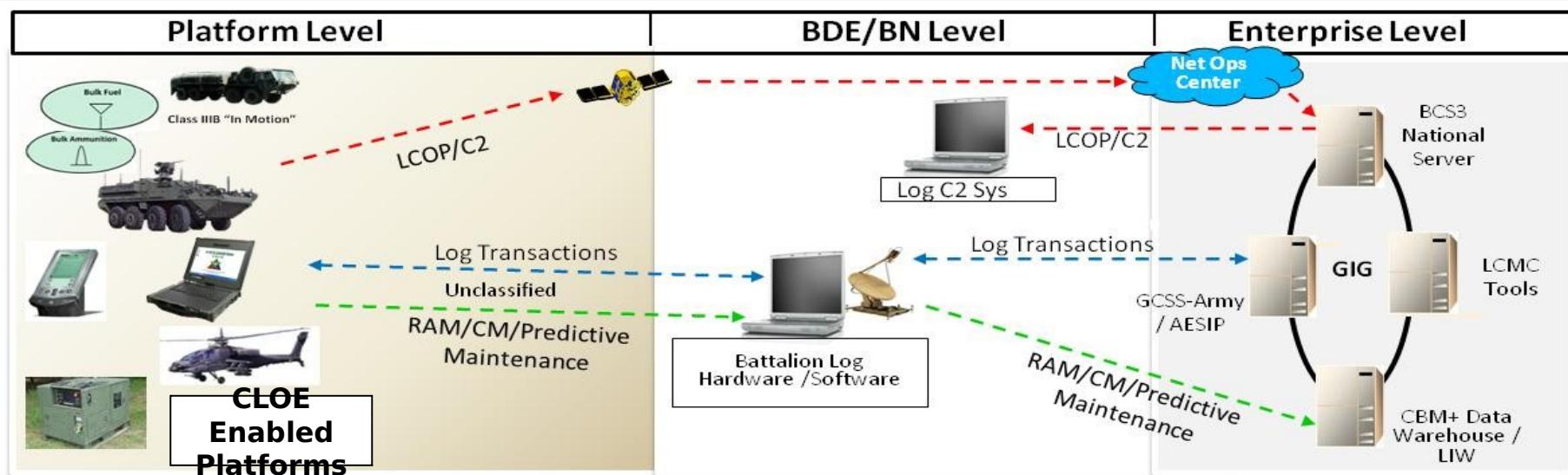
- ❑ Eliminates rationale for PM Business Case for CBM+ investment
 - HBCT Vehicle Health Mgt System (VHMS) CBA - \$45M Avg. Annual Benefit (Base VHMS), \$209M Avg. Annual Benefit (Base VHMS plus CBM sensor Investments)
 - 23 HBCTs from 2013-2030
 - Stryker CLOE CBA - \$7.5M Avg Annual Benefit
 - 7 SBCTs over 10 years
 - TACOM and CECOM CBM+ CBA's in progress
- ❑ Increases Costs of CBM+ Implementation
 - PMs must develop and fund individual data transmission solutions for CBM+ -
 - Initial analysis shows that it would cost 3x less to perform this function with organic SaF support across HBCTs/SBCTs compared to paying Field Support Representatives.
- ❑ Promotes Stove-Piped Solutions for Transmitting CBM+ Data
 - Undermines implementation of the Common Logistics Operating Environment
 - No Army-wide management of limited CSS SATCOM bandwidth for CBM+
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Summary and Path Forward

- ❑ CBM+ capability development between ground platforms PMs and the Logistics Enterprise is not aligned
- ❑ Recommend Logistics Enterprise initiate fielding of bridging CBM+ store and forward (SaF) hardware and software capability in 2015
 - Materiel solutions available - PM TMDE and PM JTDI are recommended programs to field and sustain CBM+ SaF capability
- ❑ Path Forward Recommendation
 - Technology Field Evaluation
 - FY13 Electronic Motor Stables Demonstration (part of CBM+ Pilot Program)
 - FY14 NIE Participation
 - NGWC mesh network integration
 - Define Requirements for POM Wedge
 - Deployment scenarios & cost estimates
 - Identify Army organization to POM for SaF¹²SW costs

Backup

Objective CLOE/CBM+ Environment



Automation guided by Army Integrated Logistics Architecture (AILA) & Net-Centric Data S

(CLOE/CBM+ Processes & Underlying Data Categories)

LCOP/C2	Log Transactions	RAM		CM	Pred. Maint
Vehicle & Supply Status (fuel, ammo, MC)	Maint/Supply transactions; Equipment Master Updates	Fault & Maintenance Action Logs	Equipment Operating / Usage History	Configuration Data	Bulk CBM Sensor Data

AESIP - Army Enterprise System Integration

C2 - Command & Control

MC - Mission Capability

Program

LCOP - Logistics Common Operating Pic

NOE - Network Operations Center

CBM+ - Condition Based Maintenance Plus

LIW - Logistics Information Warehouse

RAM - Reliability/Availability/Maintainability

CM - Configuration Management